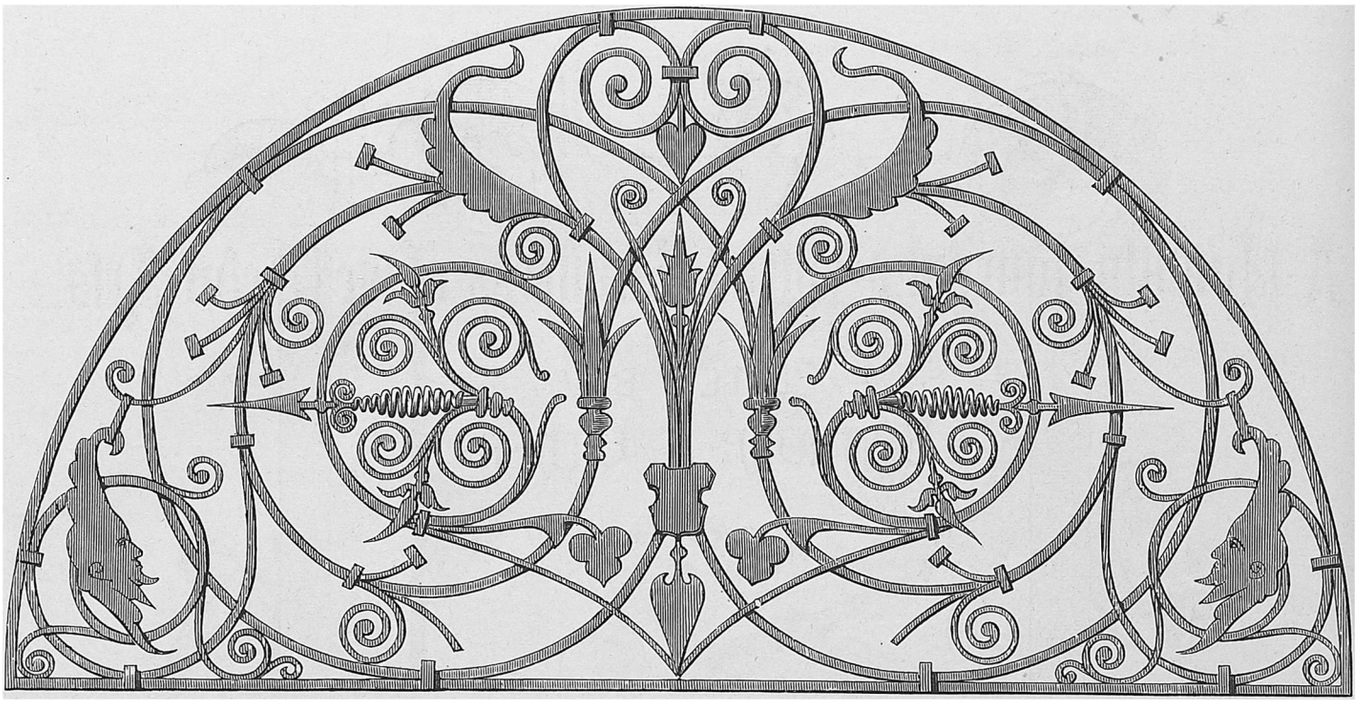

N° 21. Hungarian, 1550. Wrought Iron Gate from Urban's Tower in Kaschau.

VARIOUS.

FERRO-PRUSSIATE PAPER FOR COPYING DESIGNS.

Under this name a paper is now sold for copying designs, where exactitude and rapidity are requisite without the minuteness of photographic detail. It is in sheets 65 centimetres long by 50 centimetres wide, or in rolls of 10 metres long and 65 centimetres wide, and is faced with a greenish-grey preparation of ferro-prussiate of potash (potassium ferro-cyanide). It lasts a long time if care be taken to keep it dry and unexposed to the light. It is employed in three ways: 1. To give a white outline on a blue ground. 2. A blue outline on a white ground. 3. A black outline on a white ground.

1. In the first method, which is most often used, the drawing to be copied, and a sheet of ferro-prussiate paper are placed together in a glass hand-press, such as is used for photographic purposes, the ferro-prussiate paper being undermost. Solar light is necessary unless the design is on transparent paper. The time of exposure varies from half an hour in broad summer sunlight to three hours in a diffused light. The proof comes out a greyish olive, with coppery reflections. It should be removed to a dark place, washed repeatedly by dipping in a basin of water, and set to dry. A thick sheet of glass may be laid over the paper as a substitute for the press.

2. An inverse arrangement of colours, that is to say, a blue outline on a white ground, is obtained by employing a photographic negative of the design, giving a transparent outline on an opaque ground, in place of the design itself. The exposure will be shorter, varying from 5 to 45 minutes. As the figure in the impression so produced will be inverted, it is necessary to use an inverted photograph, or to apply its reverse side to the paper, unless, indeed, the latter be sufficiently translucent to lay over the negative. In place of a photographic negative, an artificial one may be prepared in the following way: A sheet of glass of suitable size is rubbed over with a mixture of zinc white, gum, gelatine, and water; over this is laid a sheet of paper coated with red lead, and over all a tracing of the design on transparent paper. By going over the outline of the latter with a sharp-pointed instrument, a similar figure is traced in transparent lines on the withened glass, the red lead taking up the whitening under the pressure of the graver.

3. Blue figures on a white ground are changed into black by dipping the proof in a solution of 4 grammes of common potash in 100 grammes of water, when the blue colour gives place to a sort of rusty colour, produced by oxide of iron. The proof is then dipped in a solution of 5 grammes of tannin in 100 grammes of water. The iron oxide takes up the tannin, changing to a deep black colour; this is fixed by washing in pure water.

The Practical Magazine from Bulletin des Arts et Métiers.

AN ELECTRIC MATCH.

We understand a Frenchman has just invented a simple little apparatus which will possibly sweep away ere long the match trade. It is called the electrical tinder box, and is small enough to be carried in a cigar-case. On opening this box yon see a platinum wire stretched across. Touching a spring the wire reddens sufficiently to light a cigar. The hidden agency which heats the wire is a very small electrical battery, set in action by the touching of the spring.

American Artisan.